

ILLUSTRATIONS.	Furnace and boiler	Panepanga, Luzon	Wheels, friction, paper	Bicycle tires, leakage	Comet, a new
A	c.	Paper friction wheels. 420 Paper manufacture 241, 249, 250 Parts Observatory 321	Window raising device	Bicycle wheels, truing	Commerce, our foreign
Acety ene generator, new 357 Acety procallic, apparatus 52 Africa, architecture of 318 Albiny, cruiser 289 Ambulance, an army 56 Ambulance, stere	Gage glass, safety 292	Pan the Sorneise 157	Window sish lift. 180 Wine casks, Roman 37 Wineglasses, miraculous 59 Wonders, mental 379 Woodworking machinery 21	Bievoles light weight 249	Connecticut, monitor *312
Acid, pyrogallic, appuratus 52 Africa, architecture of 313 Albany, cruiser	Garbage disposal, San Francisco 260, 261 Gardening over a geyser 24	Pencil, a new 86 Perul, to pedo boat. 7 Philadelphir, cruiser 216 Philippines. Indians of 177	Wounded care of at sea 37	Bicycling, speed in 151 Biggest in the world 54 Biltmore forest school 261 Bud. artificial 137	Copper absorbed by trees. 421 Copper, how to brown. 262 Copper resinate. 359
Ambulance, an army 56 Ambulance ships 88	Gas globe holder 213 Gas governor, new 213	Photograph printing apparatus. 277 Pier shed, collapse of a	Wrench, a rovel 6 Wrench attachment 300 Wrench, improved 262 Writing, slate 251, 206, 276, 299	Birds of Possession Island. 54 Birds, song. importing. 242	Copper resinate
Ambulance, an army 56 Ambulance ships 88 Antiquities, Egyptian 200 Armor plate, test of 136, 361 Arkansas, monitor 312 Avalon Bay and village 181 Avion, the 127	Gas holder, collapse of		: Wyoming monitor 312	Birds song, importing 242 Birds taught to sing 23 Bismarck, brain of 323 Blacking, shoe, glossy 167 Bloom of plants 466 Bluffs, concrete facing on 330 Boot value Booteness 453	Coronium in the couth 29
Avalon Bay and village 181 Aviou, the	Gate, improved 24 Gate, self-closing 180 Gate, stockyard 228	Piate, Krupp, test of a 1-5 Piow, Ross ² . Pottery making, Pueblo 75 Power house, street railway, 305, 308 Princeton University. 282, 283 Printing apparatus, photo. 279		Bloom of plants	Coronium, terrestrial 108 Corsets in Russia. 71 Corundum, note on. 359 Cotton, by-products. 291 Coughing, avoid. 295 Coughing, hose. *53
n	Gate, stockyard 228 Globe holder, Ayres 324 Gold concentration 57	Princeton University 282, 283 Printing apparatus, photo 277	MISCELLANY.	Boar, wave propelled. 315	Cotton, by-products
Baggage, regimental 56 Bakery, an Armenian 122 Ball bearing, Lawrence's 36		Pueblo pottery making	- MINOLIDIAN I.	Boiler covering, new	Courage in warfare
Excess contracts and the contract of the contr		Pyrogallic acid apparatus 52	Figures preceded by a star (*) refer to illustrated articles.	Boilers of locomotives 322	Coughing, avoid 280 Coupling, bose 53 Courage in Warfare 20 Cover for milk cans. 64 Cower for milk cans. 65 Cower for milk cans. 64 Cradle, folding 184 Cradle, folding 184 Cradle, folding 184 Cradle, folding 184 Cradle, folding 185 Cradle, folding 185 Cradle, folding 185 Cradle, folding 185 Cricket, card 185 Cricket, card 185 Cricket, card 185 Cromer, landsdip at 129
Balloon, dirigible 281 Basket maker, Hopi 75 Battleship Illinois 264	Grist mills at Tiflis 123 Gundalow, the 171 Gun carriage, a new 7	Q	Λ	Boiler scale, removal. 183 Boilers, buying and selling. 574 Boilers, steam, concerning. 278 Bomb, volcanic, discovery of. 105	Crane, locomotive, large *225 Cricket, card *107
Battleship Hinois 268 Rattleship, Russian 289 Battleships 376, 377 Battleships, Spanish, wrecked. 170	Gun carriage of the Maine. 89 Gun, Driggs-Seabury. 89 Guns, rapid-fire 203	Questions, reading by mirror 299		Bomb, volcanic, discovery of 105 Bombay University. *340 Boric acid in wines	Criticism, patriotic
Feetles, strong	Guns at Santiago	R Neft great on Double	Acacia wood, value of	Bottle closure. new	Cruicesm, parriotte. 410 Cromer, landesip at 132 Cross fighting. 445 Cruiser Brooklyn. 450 Cruiser Prinadelphia 416 Cuba, how fortified. 411 Cuba, how fortified. 411 Cuba, fivesion of 688
Bicycle for railroads 57 Bicycle famp, electric 388	н	Railroad, trans-Siberian 193 Railroad, trans-Siberian 193 Railway eut amid Urals 201	Acetylene experiments 394 Acetylene gas at Edgbaston 359 Acetylene gas exhibition 30 Acetylene gas hazard 28, 231	Box. oil retaining. 49 Bradley Polytechnic Institute. 501 Brandy Dantzic. 575 Bread baking, primitive. 122 Brick monuments. 388 Brick monuments. 388 Bricks, slag, in Germany. 102	Cuba, how fortified
Bicycle lock, Sentinel 245 Bicycle steering head 20 Bicycle tires, leakage 215	Hall, Prof. James	Railway cut amid Urals 201 Railway, Mount Lowe 274 Railway, Mount Tanalpais 33 Itailway, street, power station 368	Acetylene gas hazard 28, 237 Acetylene gas, properties 151 Acetylene generator, new 181, *\$57	Brandy, Dantzic	Cupid lighter than butterfly, *139 Cycles for farmers
Bird, artificial	Harvesting machinery 235 Hichborn, Philip 387 Holly gravity system 116 Hopi basket maker 75				Cycling, speed in
Boat, roller, Knapp 232 Boats, pilot, New York 257		Hattlesnake, skeleton 331 Relic of the Maine 88 Relief, hospital ship 81 Revenue cutter Gresbam 10	Acid, pierie	Bridge, Brooklyn, enlarging 418 Bridge, Brooklyn, safety 402 Bridge, Brooklyn, trains on 20	D
Boiler and furnace 20	Hose coupling 53 Hospital cor, naval 37 Hospital ship Relief 81 House cooler, novel 69	Ripper, seam 132 Road, stage, remarkable 184 Roller boat, Beckman. 53	Advice, good	Bridge, Brooklyn, trusses. 106 Bridge, fall of a. *219 Bridge, tubular, removal of. 388	Dam, California, great*392 Datura, poisoning by
Bombay University. 340 Bottle closure, new		Roller boat, Knapp 232 Rubber man, the 26	Africa, architecture of 313 Africa, our trade with 370 African coast trade 187 Age, old, to postpone 315 Agriculture, Secretary, report 371	Bridge, Victoria **841 Brimstone shudonds of 106	Deaths in late war
	Illinois, battleship 264	8	Agriculture, Secretary, report 371 Air, cave, purity of	Briquettes, turf	Defenses our army and coast 20
Bridge, fall of a 219 Bridge steel, at Oufa 201 Redge, Victoria 341 Bronze casting, remarkable 164	Illusion, an optical 139 Illusion, an optical 139 Incubators, Cyphere' 238 India rubber man, the 26 Indians, battleship 199 Indian chiefs 248 Indians of Philippines 177	Safety attachment for scaffolds. 357 Safety gate, bridge 340	Agriculture, secretary, report. 314 Air, cave, purity of. 218 Air cushions, elevator. 425 Air expanded by lightning. 359 Air, fresh, value of. 212 Air, improving the. 394 Air lightning. 394	Bronge casting, remarkable	Developer, pyro
Brooklyn bridge trusses 105 Brooklyn, cruiser 40, 149 Brush, window cleaning 292	Indiana, battleship	Safety gate, bridge	Air, improving the	Building, tall, test of	Diathermanity of insulators. 359 Diatoms, preservative for 246 Discipline at sea. 114 Disease, animal, communicabil. 155
Brush, window cleaning 292 Building, office, tallest	Insulator, a new	San Marino, republic of Shafter	Air, flqu d, as a drink,	Builets, wooden, Spanish. 243 Buoy cables, protecting. *340 Bureau of Ordnance, naval. 274	Disinfection, method, new 342 Divers, paralysis of
out of protecting	Iowa, battleship	Santiago, guns at	Air, liqué de Asposion. 226 Air, liqué de As a driok. 218 Air, new elements in. 114 Alabama and Canopus, the. 31 Albumen, artificat. 106 Alculmen, commercial. 86 Alculot, sbosiuto 199 Alga of Hamburg water-works. 167	Butter, bad, purification 218	Diving apparatus, new
Caligraph, Century 372	, J	Saw, ripping, self feed 21 School of horology 101 Scrubbing machine 132	Algae of Hamburg water-works 197 Alinit 87 Alloy, aluminum, new 72	C	Dobson, the
Camperan, band, simple 35	Jack, wagon, new 389	Sealer, envelope	Alloys, gold	Cables, buoy, protecting	Dock, floating, large
Car, coal, improved	К	Seam ripper, new 132 Sect-on liner, simple 72 Shed, pier, collapse of 197 Ships, American, for Russin 289 Shutter, comero	Alinan, Prof., death of 374 Alps, accidents on 298 Aluminum bronze forgings 230 Aluminum, to clean 10 Aluminum come 246	Cables, glass sheathed 256 Calcium carbide, New York 419 Calcium metal, crystallized. 118 Calcium, the Chinese 200 Caligraph, Century, new 9572 Carrows hand should 986	Dredges, sea-going, great*133 Drug stores. Berlin's
Cars, electric, Broadway	Keres pueblo	Shutter, camera 36 Sky scraper, test of a 38 Slate-writing 29, 251, 266, 276, 298 Sleds, attachment for 34		Camera, hand, simple	and the state of t
Casks, wine, Roman	Kite flying, selentific. 425 Kite, registering 347 Krupp plate, test of a 137	Socket wrench attachment 309	Aluminum coms	Campaigning in the tropics	Ear, identification by the 263
Chief, Maori 238 Chiefs, Indian 248 Chiefs, Malay 184 Church, fortified, Cuba 11		Solace, ambulance ship	Ambulances, government. 74 Americar Association. 125, 147 Ammunition hoists. 203 Anæsthesia by electricity. 20	Canal, Lake Erie and Ohio 195 Canal project. a new 374 Canal, Russia's strategic 4 Canes, walking, sultivation 362	Ear wax, softening of 196 Earth, passage through nebula 55 Earthquake wave front speed 245 Ebers, Georg 115 Education, technical 255
Clam, siphon of 378 Cleaning device, improved 322 Cloud studies 256 Cual car, improve 1 187	Lake Pilarcitos	Stage road remarkable 181	Anger effect on animal even 239	Canes, walking, cultivation	Ebers, Georg 115 Education, technical 185 Felikin leather 246
Coal car, improved	Lake San Andreas 228 Lamp, b cycle, electric 388 Lead pencil, improved 85 Leaks at sea, checking 113 Lever, throttle, new 212 Lock bissels Sentinel 245	Steam motor, new	Animals, temperatures of 59 Antarctic expedition	Caprifigs in California 147	Eelskin leather. 246 Egyptians, new light on 200 Egypt, population of 390
Colorado, irrigation in 219 Connecticut, monitor, 312 Cot, hospital, naval, 37 Country, coldest known, 180		Stencil perforator, new 100 Stern wheel steamer 251 Still, water, new 404	Architects', naval, society	Car couplings 388 Car seal breaker 66 Cars, electric, Broadway 465 Cars street, of Manila 66 Carbon dioxide crystals 55 Card original 466	Egypt, population of 39 Elfert twee, escillation of 39 Electricity on Broadway cars. 446 Electricity on war vessels 186 Elements, new in the air 184 Elements, new in the air 184
Cover for milk cans	Locomotive consolidation 353 356	Still, water, new	Arkansas. monitor. 812 Armament of the Aiabuma. 311 Armament of battleships. 168, 278 Armor plate, test of 136, 336 Armor, vertical and inclined. 86	Cars. street, of Manila	Element, a new
Cow, a malformed	Locomotive crane, large	Stopper for leaks at sea		Card cricket '107 Carnations, green. 198 Carriage coating. 150	Element, a new, xenop
Cricket, card	Locomotive, model 825	T	Army, mortality in the 263	Carriage coating. 150 Casks, wine, Roman. 937 Casting, bronze, remarkable. 9164 Causses, the region of the 185	Embalming process
Cruiser Albany 299 Cruiser Brooklyn 40 Cruiser Newark 49 Cruiser Philadelphia 226 Cruiser Brooklyn 266	Locomotives, geared. 33 Locomotives, typical 145 Lubricating box 69	Tattooing, Maori	Army tent stores	Cave air, purity of	Enaniels, expansive 139 Engineer, heroic deed of 406 Engineers, a field for 194 Engineers' Marine, Society 323
Cupid lighter than butterfly 189		Texas, fighting top of 148 Texas in action *120	Artichoke for bacter, culture, 325	Celling, canvasing a 412 Cellars, damp, remedy 343 Celtuioid, non-inflarumable. 183 Lement, porcelain 39	Engineers', Marine, Society 323 Engineering, experiment in 290 Engineering, irrigation *214
Cutting machine, paper 249 Cyclone in New York 244	Maine, battleship 300				Engineering, mechan, railway 251
D	Maine, battleship a00 Maine, relic of the 84 Malny chiefs 184 Maori chief and hut 233 Maori willows 223	Tide motor, new	Asbestos leather III2 Asia, Central, Russia in 139 Association, Amer. Adv. Sci. 135, 179 Astronomy, a discovery in 212 Atmosphere of London 55 Aurora borealis, height 394 Austria, bicycles in 279	Cerumen of ear, softening. 196 Cervera, fleet of, destruction. 34, 170 Cervera, fleet of, remains. 972 Chair bottoms, cane, repair. 39	Engine, rofary, improved*389 Engines of the Oregon
Dam, Crystal Springs385, 392 Dead, disposal of, in Egypt 200 Dewey squadron, reinforced 25	Marin Wharman march of 100	Tire, cushion, novel	Austria, bicycles in	Champiain, statue of 211	Envelone moistener 100 Ether tippling 108 Etherson, new gas 147 Euphorbium, gum 102 Evolution, Heeckel on 166 Exhibition, Electrical, Como. 28 Exhibition of snakes 28 Exhibition, Transmiss selppi 168
Distilling apparatus	Mexico, New, architecture 313 Miles and Wheeler, Generals 107	Torpedo boat Peral 7 Torpedo boat, Tesla's 326 Train, quartermaster's 56	Avion, the	Channel for N. 1. Bartor. 418 Chemistry, new discoveries in. 226 Chief, New Zealand, bouse. 343 China, exporters to, hint. 371 China, our commerce with. 5	Exhibition, Electrical, Como 9 Exhibition of snakes 298 Exhibition Transmiss signal *168
Dock, floating, large 196 Drain tiles, novel use for. 267 Draught attachment, locom. 196	Maria Theress, week of Medal, Scientific Americaa. 28 Mexico, New, architecture 31 Mines and Wheeler, Generals 167 Mines, submarine, explosive. 217 Mo.a, skeletion of 25 Moistener, envelope. 100 Moistener, envelope. 150 Monitor Monadnock. 25	Train, quartermaster's 56 Trains, express, fast 129, 152 'rans-Mississippi Exhibition.161, Trans-Siberian railroad 168, 169	n	Chinch has notes on 406	Expedition, Antarctic
Dredges, sea-going, great 133	Monitor Monadnock 25 Monitor Monterey 25 Monitor Nahant 97 Monitors, the new 312 Monitors, the new 85	Tread sanding machine	Hacillus, whooping cough 375 Hacteria in London sewage 394 Baggaze, regimental *56	Chrome yellow, testing	Experiment la engineering
Engine, rotary, improved 3%	Monitors, the new	Trolley, electric, Broadway. 405 Trusses of Brooklyn bridge 105 Turbines, new, at Niagara 373 Turret of the Nahant 104	Bacteria in London sewage 384 Baggage, regimental 956 Balance, chemical, new 355 Bail bearing, Lawrence's 956 Ball bearing, Hitchcock's 9164 Balloon seent high 918	Claematograph in surgery	Export and our patent laws
Engine, traction, great 235 Engines, express, typical 145, 152 Engines of the Nahant 105	Motor, water, novel 118 Mount Tamaipais 296 Multiplying by fingers 365	Turret of the Nahant 104	Ball bearing, Hitchcock's. *164 Balloon ascent, high 218 Balloon ascent, remarkable. 363	Cleaning devices, improved*293 Clerks, social life of	Express engine, 10-wheeled*324
Exhibition (Beautient 190		Unicycle, a noyel	Balloon, dirigible	Clerks, social life of . 343 Climate, change, effects of . 34 Climate, altitude affecting . 10 Clocks, speaking . 150 Closes trap, protection of . 183 Clothing, allod	Eye, accidents to the
Exposition, Omaha 129, 161, 168, 169	Nahant, monitor 97	Unicycle, a novel	Ralloon was destruction 67	Clouds, photography of 22	F .
Express engine, 10-wheeled 314	Navies of the world 337 344, 309,	. v		Coal car improved *187	Fabric, a new
P	Needle, variations of the	Valve, testing, new Vegetation house, Washington 58 Vegetation pots, weighing 362, 363 Ventilator, house 69 Vectoria bridge 341 Visayas women weaving 185	Barometer, a giant 39 Baroscopes, production of 343 Baths Sutro. 52 Battleship Illinois 234	Coal for the navy. 436 Coal, output of Natal. 139 Coaling stations. new 136 Coast signal service 238 Coating, waterproof 150 Coating of waterproof 2	Fact, and fancy. 322 Fairy stones, Patrick County. 324 Faczine in Russia. 53 Farm implements, trade in 248
Farragut, torpedo boat dest	New York, cruiser	Ventilator, house	Barnscopes, production of 348 Barths Surro. 52 Battlesbip Illinoises. 324 Battlesbip our lates. 32 Battlesbip, our lates. 32 Battlesbip, Alabuma class. 51 Battlesbips, Alabuma class. 51 Battlesbips, higher speed for 82, 99 Battlesbips, higher speed for 82, 99 Bed. extension. new 99	Coating, waterproof 150 Coatings for vessels. 71	Farmant, speed of the *SSFarmant, speed of the *SSFarmant, speed of the *SSFarmant, speed of the *SSFarmant, speed belief, submatic *364 Fertilizer for cereals, new S7Fever, typho d, in army 234 Fiber separator wanted 330 Fiber separator wanted \$350 Fibe
Fire-boxes, opening device 183	New Zealand woman	Visavas women weaving, 185 Viscosimeter, a new	Battleships, bids for	Coating waterproof 130 Coatings for vessels 71 Cockroaches, instinct of 9 Colos, nickel and aluminum 246 Cold and warm years 37 Coldest country	Fertilizer for cereals, new 87 Fever, typho d, in army 234
Fire-extinguisher, new	Observatory, Paris 321	110	Ree stings, remedies for 246	Collectors, Wimshurst machine 247	Field gun Drigge Sontury 180
Fish cars, mininery in. 425 Flag. Spanish, captured 71 Fleet, Cervera's, remains 73 Kloor-scrubbing machine 132 Florida monitor 32	Observatory, Paris 321 Oil retaining box 69 Omaha Exposition 129, 161 168, 169, 248 Oquendo, gun from 333 Oppendo, grook of 65	Wagon jack, new			Filters domestic 995
Florida, monitor 312 Flue-cleaner, new 69 Fly, the educated 155 Flying apparatus, new 137	Oquendo, gun from 393 Oquendo, wreck of 65 Ordnance, Vickers-Maxim 297	Warships, Russian. 294 Warships, Spanish, wrecked. 170 Water distilling apparatus. 404 Water main. bursting of. 411	Bicycle frame, the	Colors animal protective 55	Fingers in multiplying
		Water main, bursting of	Dicycle lock, Sentinel,		
Fourdrinier machine 250 Framing square, White's 22	P Pan, bronze statue	Water still, Raiston 6 Water works, San Francisco. 328, 320 Wheels for sleds 224	Bicycle for railroads	Colors, gouache	Fire extinguishers, composition. 102 Fire extinguishers, simple. 246 Fire from dropping tool. 212 Fire losses for 1807. 100
Freight ramps, traveling 100	Fun, bronne statue 164	THE MOCIES FOR SHOULD			

430		0,	80	L	0, ,
	1	1	1	1	
Fire system of London	India ink sketches, protection 34 india, ramfall in 32	Mexico, New, architecture *313 Microscope images drawing 264	Pitcher plants and spiders 167	Screens for X ray work	Trade methods, faulty 25
Firecrackers, how made	9 India rubber man, the *2	Miles and Wheeler, Generals *107	Placards waterproof	Seal Dreaker, car	
Firefly, light of the	indian names of war vessels	Milk, boiled, as a beverage 134 Milk can cover, new	Plagne new center of.	Sean ripper, new	Train, the fastest
Fishes, killing	3 I Indiana, punch bowl of 28	Mik jars, glass, danger from 246	Plague in Vienua	Section liner, simple "Ta	Trains, long distance runs 215 Training, physical, in schools 119
Fishes, slime on 2 Fing, Spanish, captured *	5 Indigoes, artificial 16 1 Industrial Commission, the 6	Milk Juz, death in the	Plant, egg. orientation	Seeds, cermination of. 130 Selenium compounds. 401	
Flags of our warships	0 Industries. Eng ish, Amer. prog., 16	Mimiery in fish eggs*425	Plant, the laughing 146 Plants, garden, personous 136	Shed, pier, conapse or *156	Transparencies 26
Flames, volcanic Flax culture, United States 3	8 Ink, printer's, fast 8 Ink, stamping, for linen 185	Mine explosion, accidental39, 105 Mines, submarine, explosion *217	Plants of Hawait 21: Plaster casts, to barden 141	Ship building, American, revival 258 Ship building in England 308	Transsiberian ranway 74, *190
Fleet, Cervera's, destroyed	4 Insect drunkards	Mining in Japan 406	Plaster of Puris, setting of lor	Ship canal, Lake Erie	I Trap, closet, protection is:
Fleet, Cervera's, remains of *7 Fleet, victorious, return of*14	Insect Samsons	Mitis patent, the. 309 Monitor Monadnock *25	Plate, Krupp, test of a	Ship and the man 146	Tread sanding machine*213
Femish smoker E	2 Insomnta, phenomena of 214	Monitor Monterey *25	Plow. Ross' *36	Ship and the man	Tree planting, prospective 39
Floor scrubbing machine*E	2 Instinct or superstition	Monitor Nabant *104 Monitor, passing of the 306	Plumb bobs, deflection of 327	Ship, repair, Vulcan. 35 Ships, hospital. *88	Trick, an interesting*USS Trinidad pitch lake
Florida, monitor *31 Flue clenner, new *6	Instruments, sterilizing 58	Monitors, the new	Potenting by inhalation	Shoe blacking, glossy 167	Trofley, e cetric. Broadway*405
Fluids, preservative 24	Insulators, diathermanity of 359	Monitors, the new 312, 354 Monkey and clephant, thought 259	Polish, henzine	Shoe grease, lustrous 334	Trolley line, military
Fly, the educated	Insulator, a new	Montezuma Valley, explor	Polish, shoe, antacid	Shoe postsh	Trolley in snowstorm
Flying machines and ordnance 40	I Inventions, little, fortunes 186	Moth, the gypsy. 53 Motor carriage exhibition. 2 5	Pompeii, a new 162	Sketches, pencil, to profect 343	Troops, care of, in tropics
Food preservatives, dangers 13 Foods, artificial 16	Inventions, recently patented 12, 28, 44, 61, 77, 92, 109, 141, 156, 173, 188, 204, 237, 237, 232, 268,	Motor carriage exhibition 25 Motor, steam, new 85	Porce ain cement	Siberia, luxurious travel in 164 Signal service, coast 290	Trunks bewn in winter 102
Forest school, Biltmore 26	173, 188, 204, 232, 237, 252, 268,	Motor, tide, new	Portland, loss of the	Signal service in Porto Rico 117	Trunks bewn in winter 10: Tuberculosis, note on. 2: Tunnel, Fourth avenue 307
Forests, ax a preserver of	284, 300, 316, 332, 348, 364, 380	Motor, water, novel*118	Porto Rico, botanical explor 295	Signaling, railroad	
Forestry preservation	Invention wanted	Mount Lowe railway	Porto Rico, commerce of 115 Porto Rico, conditions in 354	Silver, influence of sunight 200	Turf briquettes. 2:2 Typewriters, cramp of 133
Fort flestions Board, the 23	Iron, how to brown 262	Mount Tamalpais. •296 Mount Yillimani ascended 195 Mountain, highest American 280	Possession Island and its birds 54	Silver plating plant, botel 214 Sisal fiber separator wanted 390	Typewriters, cramp of 134
Forts, Cuban *1 Fountain at Ancona *27	fron manufacture, progress 87 Fron ore, bog, in Canada 122	Mescles, the, during work 140	Postage stamp gum. 209 Powder, smokeless, factory 70	Sky-scraper and old-fogyism 407	Typewriter and hearing 23 Typewriters, variety of the 163
	Irrigation, artesian 58	Multiplying, fingers in265	Powder, smokeless, new 131	Sky-scraper, test of a	Typhoid in the army 234
Framing square, White's. *25 France, Bayal maneuvers. L6	Irrigation engineering		Powder, concentration of	Slate writing, spirit 227, *229.	Typhoid and ice cream
Freight ramps, traveling	Italy, railways of	N	Power, transmis, through air 30	Slate writing, spirit 227, *229, *251, *266, *276, *299, 343	
Freshmen, age of 36	Ivory veneers 139	Valuant manitor #104	Priene, excavations at 132 Princeton University *282	*251, *266, *276, *299 343 Sieds, attachment for *324 Slides, lantern 277	U
Fruit free, new 26 Furnace and boiler 22		Nahant, monitor	Printing apparatus, photograph #277	Slime on fishes	Cmbrella industry 107
Furniture preservative 180	J	MILLER, COMPOSITEDIAL OF	Printing, invention in 262	Smells, dangerous	Unicycle, a novel,
	lask waren new 1980	Nature, balance of, disturbing 53	Prints and labels 66	Snoker, a Flemish	Uniform of the sal or
G	Jack, wagon, new	Naval engagement, lessons of 50 Naval show in New York 140	Profession for young men, new., 258 Projectiles, navy. **9	Smoker, a Flemish	Uniform of the soldier
Class after artists	Jenner, Sir Wm., death of 412	Navigation, acrial, experiments, 132	Property, industrial, commission*354	Sound, velocity	University of Bombay *840
Gage glass, safety *292 Garbage disposal, S. Francisco *260	Journal, American, oldest 195 Jubilee, scientific, coming 83	Navy, coal for 426 Navy, probable increase of 130	Ptomaines of meats	Soap substitute, Arabian 71	University, Princeton*282 Uranium intensifier 182
Gardening over a geyser 821	The state of the s	Navy, proposed additions to 370	Pueblo arts		Land processing the control of the c
Gus, acetylene, at Edgbaston	142	Navy, Secretary, report. 370 Navy, U. States, England on 60	Pyro developer	socket wrench attachment	
Gas, acetylens, generator	II.	Navy, United States, status of. 66	Pyrogallic acid apparatus *52	Schotra expedition to 300	v
Gas acetylene, hazard 28, 231	Keely, John W., death of 354	Navies of the world		Solder for glass	Valve, testing, new*[18
Gas, a new, etherfon	Keres paeblo *314 Key to lock any door *293	Needle, the magnetic	Q	Soldier, uniform of the 227	
Gas globe holder *32;		Negative varnish 198 Negatives, developing 118	Quining in Cormun-	Soldiers, thirst of	Varnish and Inseed oil 102
Gas holder, collapse of *40s		Neostyle, rotary	Quinine in Germany 26		Varnish, leather
Gas, Pintsch	Kite, telephone	Newark, cruiser. *54 Newspaper offices, breakdown. 402	13	South America, trade of 194	
Gas, undiscovered, in air	Frupp plate, test of a*136	Newspaper the oldest 166	R	Space, material from 59 Spain, dominions of, integrity. 148	Varnishes 406 Vegetarians, endurance of 36
Gastric juice in medicine 20	Krypton	New Zealand, pensions in 243 New Zealand, pensions in 243 New Zealand, peturesque 223	Radiography of heart	Spain, loss of empire 76	Vegetarians, endurance of 36
Gate, improved *24		Niagara Falis, age of		Spain, losses of on sea	Veneers, ivory 139 Ventilator, house 460
Gate, self-closing *180 Gate, stockyard *258	L		Railroad bicycle. *57 Railroad in Philippines. (9	Speaking tube, the 8379	Vessels, wooden, leakage, 281
Gelatine, force of contraction 198	t shale and monta	Nickel co:ns 246 Nitrocellulose solvent 86	Railroad in Philippines	Specimens, biological, preserv 246 Spectra, prismatic, reducing 102	Vesuvins in operation 198
Geratine in gum. 411 Genealogy, researches in. 22	Labels and prints		Railroad signaling	Spectroscope, new	Victoria bridge
Genizah, or treasure house 37	Labrador, wealth of	Notes and receipts, 39, 150, 183, 199,	Railway, electric, Broadway *405	Speeds per second (9)	Victoria bridge 341 Vienna, plague in 291 Violets, to keep fresh 496
Geology at Amer. Association . 179	Lake Erie and Ohio canal 135	246, 295, 310		Spider threads, utilization	Viscava, meaning of
Gevser gardening over a *24	Lamp blevels electric #388		Railway, Mount Lowe *279	Soiders and Ditcher Diants 167	Viscosimeter, a new
G raffes, concerning 121	Land, rapid rise of	0	Railway, Mt. Tamulpais *39	Spirit writing	Vision, color
Glaciers, measurement of	Land. sterile, reclaiming	Observatory of Paris *321	Railway, mountain, in tropics 148 Railway, Nicaraguan 262	Stage road, remarkable 181	Voicanoes, flames of 228
Glass eye industry, the 102	STREET, STREET	Observatory, Pike's Peak 140	Railway runs, long distance*152	Stamping ink for linen 183	Vulcan, floating machine shop 35
Glass, interception of light by 266 Glass, resistance of 163	Languages of Phi (ppines 163	Observatory, Prince Monaco's, 342 Ocean, phosphorescence 183	Railway stations, to beautify (8) Railway, street, power station *308	Stars, finding the 119 Stations, railway, to beautify 68	vuican, noating machine snop a
Glass, solder for	Lantern slides, preparing 277 Lend pencil, improved *86	Ohio River age of 179	Railway ties, meial vs. wood 370	Statue of Champlain 211	***
Globe holder, Ayres'	Leakage of cycle fires	Oil a bad road material 467	Railway, trans-Siberian	Statue of Pan	W
Glow worm, rays of the	Loaks in vessels, stopping *119	Oil retaining box. *69 Oil, wood, Japanese. 199	Ratiways of Hawaii 228	Steam meter, new	Wagon jack, new*389 War balloon, destruction of67
Gold beating 76 Gold extraction process 69	Leather, ashesios	Oiled clothing 172	Rallways, Italian	Steamer Bourgogne, loss 34	War electrical end of
Gold fields, Yukon 148 Gold, recovery of	Leather, celskin 246 Leather varnish 356	Ordnance and fly ng machines 403	Railways, new motive power 150 Railways, street, New York 258	Steamer, tank, fire	War, electrical, end of 211 War vessels, Indian names 19
Carried Courts Case Medic	Lemon juice, preserved 375	Ordnance Bureau, work of 274	Railways and telegraph in Spain 74	bility 51 Steamships, Atlantic service 322	Wastare, modern courage in 20
Gold solder 310 Gold water, preparation of 375	Libraries, chained 120	Ordnance, naval, improved 386 Ordnance, Vickers, Mayiro *297	Railways of United States 146 Rainbow, remarkable 199	Steamships, Atlantic service 322 Steering head, bicycle 20	Warfare, percentage of hits
Gondola, history of the 247	Libraries of Great Britain 214	Oregon, brave men of the 85	Rainfall, an abnormal 118	Stencil perforator, new *100	
Goungha colors 150	Library, a railway 395	Oregon, engines of the 130	Rainfall, fluctuations in 59	Storn wheelers for the Yukon *251	Warships, American, for Russia., 234 Warships, analysis of
Gout, chemistry of 133 Governor, gas, new 213	Life protector, Colome's*119 Light, a novel	Organ pipe sounds	Rainfall in India 827 Ramps, freight, traveling*100	Still, water, new	Warships, armor on 199
Clearbite from acetylone 103	Light, turn on the 146			Stings, bee, remedy for 286	Warships, new, armament 163
Graphose pe, an aerial 44 Grasses for waste places 103	Lighting cross 245 Lightning explodes mines 39		Rats, disease of	St. Louis, rearming the 76 Stone, wearing power 327	Warships, Spanish and Amer 35 Warships, Spanish, wrecked*170
Gravity return system*116	Lightning explosies times	p	Ray, X. work, screens for 250	Stones fary	Wasp, mud, mistake of 231
Frest Britain, Bavv of *376	1,tme vs. malaria		Rays, ultra violet 327	Stones electro-plated 358	Water, Atlantic, constituents 71 Water, boiled, as a beverage 14
Gresham, revenue cutter	Liquids, surface tension 167	Painting ground, new 394	Rays, X. effect on colors 67 Rays, X. on war vessels	Stoves, army tent	Water, boly, microbes in 343
Gulf of Venice doomed 343	Lithium 379		Recipes, miscellaneous, 19, 86,	Studidity, definition of 296	Water distilling apparatus *404
Jum arabic	Lithium, researches on	Paper, deterioration of	150, 167, 183, 199, 218, 230, 246, 262, 295, 310, 343, 859, 575, 394, 406	Submarine work, new devices 58 Submarine coating for vessels 71	Water bain, bursting of
Gum euphorb um 102 Gum, gelatine in 411	Locomotion, aerial*137	Paper friction wheels	Red Cross, founder of 200	Substance, phosphores., new 218	Water motor, novel
Gum, postage stamp 209	Locomotive boilers, capacity 322			Subway, extension of the 235 Sugar, luminous 39t	Water pipe, American
Gun carriage, a new *7	Locomotive crane, large *325 Locomotive, electric 402	Paper, manufacture of	Regiments, colored, in action 55 Relic of the Maine 88 Relicf, hespital ship 55 Republic, the smallest 256 Research, acrial 132 Reservoirs, protection from rust. 250	Sumao testino SE	Water econring perfumed 201
Gun curringe, a new *7 Gun, field, Driggs-Seabury *83 Gun, stee, Catling 418 Gun 13-luch nava 274	Locomotive, explosion of a '228	Papyri, old. at Chicago	Relief, hospital ship	Sun, heat of the 119 Sunshine, measurement of, 309 Survey, Geological, U.48, 135 Survey, magnetic, of globe, 202	Water still, Ruiston. *6 Water supply, Camp Thomas 178 Water supply, San Francisco *328
sun, 13 loch naval	Locomotive, Hallputian*212 Locomotive, mammoth*856	Paris exhibitions	Research, aerial.	Survey, Geological, U4S 135	Water supply, San Francisco *328
un, 13 loch naval 274 Juns, 17 and 13 loch 343 Juns of Spanish cruisers 288	Locomotive, model *325 Locomotive, oscil, cylinder *471	Paris, rapid transit in	Reservoirs, protection from rust. 20	Survey, magnetic, of probe 202	Waves Hertzian telegraphy by 283
luns of Spanish cruisers	Locomotive, oscii, cylinder*421	Parks, zoological 55	Revenue cutter Gresham *10		Wax spots, removal of
Igns at Santiago *117 Juns, Vickers Maxim *297	Locomotive tenders, coaling *187	Paste, wall paper 419	Revision, a wise		Weather service, West India 184
Jundalow the	Locomotives, Amer. for England 418	Patent laws and our exports			Weather signals, search-light 22 Weather stations, Caribbean 6
Jundalow, the	Locomotive, a pygmy 167 Locomotive, a pygmy 167 Locomotive tenders, coaling, *187 Locomotive, 10-wheeled \$24 Locomotives, Amer. for England 418 Locomotives, electric, weight 323 Locomotives, exacted \$29	Paralysis of divers.	Rifles, Mau-er	Tank steamer fire	Wells, D. A., death of 323
			Road, ejectric, I ondon	Teasel, French 218	Wells, D. A., death of 323 West African coast trade 187 West Indies, aborigines of 60
H	London, fire system of 66	Patent publication, Hungarian 357 Patent rights, necotiable paper 4, 9 Patent rights, taxation 250 Patents in China 256 Patents in China 251 Patents in China 251 Patents in Russia 218 Patents in Russia 250 Patents arrange Berlin 250 Pen, the Surprise 251 Pen, the	Riflest Man-er. 279 Ripper, seam 1-2 Road, ejectric, I ondon 294 Road, stage, remarkable 181 Roads, good, cost of 239 Road, stage, remarkable 179 Roads, good, cost of 230 Road, stage, remarkable 179		Wheat production 36
Insokal on avalution	London, fire system of	Patent rights, taxation	Loads, good, cost of	Teefin, decay of, cause. b) Telegraph foot. of 359 Telegraph poles, wood for 234 Telegraph, the, in Spang. 44 Telegraphy, duodecaples. 124 Telegraphy, duodecaples. 125 Telegraphy, was application. 35 Telegraphy, new application. 35 Telegraphy, new application. 35	Wheat supply, world's
Ineckel on evolution	300 million and a second a second and a second a second and a second a second and a	Patents in Austria 346	Goads, good, cost 01. 280 Neck, Ideest known. 173 Sock, wearing p-wer. 377 Socks, igneous, origin. 179 Goler boat, Beckman. 433 Goler boat, Knapp. 422 Lose, Joshua, death of. 371 Lubber, artificiat. 225	Telegraph, the, in Spain 74	Wheat supply, world's
taristones, bacteriology of Mo- lair, human 182 Iail, Dr. James 118, *154 furiem speedway, the 37 farvestin; muchinery 235 hyans floating dock 220 (awaii, lunguage of 37	26	Patents in China	loller boat, Reckman	Telegraphy by light	Wheels, friction, paper*420 Whooping cough bacillus
farlem speedway, the	M	Patina, green, for roofs.	Roller boat, Knapp*232	Telegraphy, new application. 163	
farvesting machinery	Machine work, educat value, 186	Pavements, brick, cleaning 403	lose, Joshua, death of 371	Telegraphy, wireless, Belgium 250	Wind bracing buildings
avana floating dock	Machine work, educat, value 186 Machinists, nomenclature of 182 Magic and new journalism 261	Payements, carriage, Berlin 253 1	Rubber man, the	Telephone for deaf-mutes 182 Telephone, an Indian 202	Wind instruments, sounds 199 Wind pressure 391
Legenti planta of 015	Magic, Swedish edition 298	Pen, the Surprise*187	Rubber substitute, a	Telephone, an Indian 202 Telephone, French, new 420	Wind pressure
lawati, railways of 228 iswati n Islands, frade center. 74 feart, alteration of form. 128 leart, radiography of 87	Magnets, tests of 198	Sancti land now *SE	Russia in Central Asia		
leart, alteration of form. 198	Mail tubes to Brooklyn 99	Pensions in New Zealand. 243	Russia, famine in	Telephony, turm, Michtgan 155	Window sash lift
leart, radiography of	Maine, battleship	Pensions in New Zealand. 243 Feral, torpedo boat 77 Petroleum, to decotorize 236 Petroleum, discovery, new 101	lust spots, removal of 295		Wine casks, Roman
leavens in July	Mining, 1088 of the				
leavens in August	Maine, battleship *361 Maine, loss of tree. 7 Maine, relic of the *88 Make haste slowly. 82 Maiaria, lime versus. 338 Man, preglaciai 71 Manchuria. 1.59	Petroleum as fuel 183	8	Tent stoves, army	Wood metallichester *379
leavens in September 140	Manaria, lime versus	Petroleum in Japan 218	afety attachment for seaffolds \$ 52	Tfol of the Arabs. 71	Wood cil, Japanese 199
court acceptants of the same o	Man, pregiacial 71 Manchuria 1.99 Manila, meaning of 35 Manila, street cars of 86 Manties, incandes, liquid for 32 Manties, restoration of 86 Marria beress, loss of 38 Marria press, loss of 32 Marria press, loss of 22	Petroleum, discovery, new 101	afety gate, bridge	resin, latest invention *356 reans in action *120 Tfol of the Arabs 71 Pheater, Olympian *43 Thermometer, alcohol, 70 foot. 246	\(\frac{\pi_{\text{args}}}{\text{wonders, mental}}\) \(\frac{\pi_{\text{sg}}}{\text{sg}}\) \(\frac{\pi_{\text{wood}}}{\text{wood}}\) \(\frac{\pi_{\text{mental}}}{\text{ls}}\) \(\frac{\pi_{\text{wood}}}{\text{sg}}\) \(\frac{\pi_{\text{sg}}}{\text{woodenware preservative}}\) \(\frac{\pi_{\text{sg}}}{\text{ls}}\) \(\frac{\pi_{\text{ls}}}{\text{ls}}\) \(\frac{\pi_{\text{ls}}}}{\text{ls}}\)
eavens in December	Manila, meaning of 355	Phantascope, medal for 375 8	afety attenment for scanding. 37 afety gate, bridge 340 allor, uniform of the. 243 saki, a Japanese drink 2:0 alad dressing (7471) 92	Thermometer, arcogor, at root 240	Woodworking machinery *21 Wounded care of, at sea *37 Wrench, improved *262
envens in January	Mantles, incandes, liquid for	William the normate company 150 S	alad dressing (7471)	Thermometer fluid, new	Wrench, improved
ellgramite, the 71 lemostat, electric, Tait's 140	Mantles, restoration of 86	hilippine toponymy 356 8	a't. effect of eating 24	Thirst, quenching the 7	Wrench, a novel *6 Wrench, socket, attachment *509
ichborn, Constructor	Maria Teresa, loss of	Philippine toponymy 355 8 Philippines, Indians of \$184 8 Philippines, languages of 163 8	ants used in photography 10!	Phrottie lever, new 2919	Writing, slate *229, *251, *266.
	Massage treatment, history 275	Philippines, languages of 163 S Philippines, map of, unique 83 S	att. effect of eating 231 alts used in photography 10! ampling machine, new 112 am Francisco water works, 238		
oney, Kussu 26 opkinson, Dr. John 195	Match industry, evils of 298 Matches, consumption in France 100	Philippines, map of, unique	an Juan, defenses of *68	Fig. motal vs. wood	Wyoming, monitor*312
	Matches, consumption in France 100 1 Vatches without phosphorus 6	hosphorescence from decay 359 S	an Francisco water works 525 an Junn, defenses of 93 an Junn, defenses of 93 annago, the fall of 94 annago, the fall of 94 annago, mprovements in . 24 antiago, my lotter 50, 34 antiago, our army at . 34 antiago, our army at . 34 antiago, our army at . 34 antiago, our army at 8	Ticket Bolder and register. \$2 Tide motor, new \$185 Tiles, metal vs. wood \$30 Tiles, drain novel use for. \$267 Tiles, drain novel use for. \$267 Tiles, carrier of \$48 Tiles, c	
orology, school of		hosphorescence, oceanic 183 8 hosphorus, production of 228 8	antiago, guns at	ime recorder, Rochester *404	X
ose clip ospital arrange, in London 227	Mansors vs. Krnv. lorgensons 279 1	Photochromy of metals. 386 8 Photocraph printing apparatus. 277 8 Photograph apparat, automatic 239 8 Photographs, varnish for	antiago, Improvementa in 246	Fig. cushing novel	Young new element
ospital, an ancient 106 ospital ship Relief 35	Maywell, Clerk memorial 249	hotograph apparat automatic 221 S	antiago, our army at	l'ire, pneumatic, novel	Xenon, new element 180 X-rays, effect on colors 67
ospital ships	Meat, preservingl	hotographs, varnish for 167 8	antugo, Shafter's arrival *8	Poning solution	
ospiral ships	Scale, a market for our 325 1	Photography of alouds 99 8	antiago tragedy, the 98	Pools, fine fissures in	v
ouse cooler novel	Medicine, history, exhibit 124	hotography, films for. 185 8	apphires, white 150 aw, ripping, self feed 21 caffolds, attachment for 357	Pening solution 233 Pools, fine fissures in 394 Pools, mech. Engl. and Amer. 402 Formado in New York 244 Forpedo boat, 35 knot. 211 Forpedo boat destroyer, launch 5	
	Medicine, history, exhibit 124 1 Med cine time to take 246 1		caffolds, attachment for*357	Forpedo boat, 35." knot 211	Yale, obysical statistics 106
ydrogen in the air	Megaphone in war. 69 Mercerization of cotton 2 % 1		chool, forest, Biltmore		few berries of the 343 Years, cold and warm 327 Yellow, chrome, testing 343 Yukon, cost of fiving in 326
ydrogen, liquid	Mercury, soluble 375	hysicians, chirography of 375 8	chool, torest, stumore. Solichool to horology. 101 chool of horology. 101 chool santation. 35, 559 chools, developing. Saxony. 25, chools, developing. Saxony. 147 clence noies. 22, 55, 71, 102, 118,	Torpedo boat Peral	Yellow, chrome, testing 343
	Mercury, soluble. 373 Metals, conductivity of 150 Metals, photochromy of 366 Metals, rare, cost of 251 Metals, vapor of 154	retures for hospitals	chools, developing, Saxony		Tukon, cost of living in
1	Metais, rare, cost of	Pierie acid	cience, golden anniversary83, 147	Forpedo, the Tesia 322 Fower, Eiffel, oscillation of 309	
	Metals, vapor of				

